energy as kinetic energy and all causation as by impact; for this is the only kind of energy and of energy transaction which we can describe and which seems to us intelligible in terms that are not anthromorphic, terms which, as Hogben would say, have publicity, and are not private, terms whose meaning is based mainly on experiences of visual perception. Yet it remains true that a being who was purely contemplative and incapable of striving, of action, would never be able to arrive at a conception of energy. He could describe, but he would be unable to think dynamically, to conceive of force or energy; and therefore would be immune to the error of taking a product of abstraction for a concrete reality.

Consider yet another form of energy—that of the bent steel spring, or energy of stress. Since we have no adequate theory of the rigidity of solid bodies, it follows that we lack any satisfactory way of conceiving the exertion of force by the bent spring and the energy resident in the spring when bent. We imagine that the molecules or the crystals of which the spring is composed are pulled slightly out of the spatial relations to one another which they had assumed, the tenacious persistence in which relations constitutes the rigidity of the metal. But why do the molecules or crystals so strongly prefer these relative positions ? Why, when displaced, do they strive so strongly to resume or restore these relations ? We do not know. We can measure the amount of this latent energy by letting it do work such as

throwing up a ball of known weight. But whatever be the true or best way of conceiving this energy of stress, it is clearly not something that can exist over and above the molecules or the crystals of the steel bar; it is a function of those particles in those positions relative